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What is claimed is:

1. An expandable stent comprising a proximal end and a distal end in communication with one another, a tubular wall disposed between the proximal end and the distal end, the tubular wall having a longitudinal axis and a porous surface defined by a plurality intersecting members arranged to define a first repeating pattern comprised of a polygon having a pair of side walls substantially parallel to the longitudinal axis, a concave-shaped first wall having a first apex and a convex-shaped second wall having a second apex, the first wall and the second wall connecting the side walls, at least one of the first apex and the second apex being substantially flat, the stent being expandable from a first, contracted position to a second, expanded position upon the application of a radially outward force on the stent.
2. The stent defined in claim 1, wherein both the first apex and the second apex are substantially flat.
3. The stent defined in any one of claims 1-2, wherein the first apex and the second apex are of different length.
4. The stent defined in any one of claims 1-2, wherein the first apex and the second apex are of the same length.
5. The stent defined in any one of claims 1-4, wherein the first wall and the second wall are substantially equidistant from one another along an axis parallel to the longitudinal axis.
6. The stent defined in any one of claims 1-5, wherein one of the first apex and the second apex is substantially arcuate.
7. The stent defined in any one of claims 1-6, further comprising a strut connecting the first apex to the second apex.

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8. The stent defined in claim 7, wherein the strut is curved with respect to the longitudinal axis.
9. The stent defined in claim 8, wherein the strut has length of up to about 35% greater than the distance between the first apex and the second apex.
10. The stent defined in claim 8, wherein the strut has a length up to about 15% greater than the distance between the first apex and the second apex.
11. The stent defined in claim 8, wherein the strut has a length in the range of from about 2% to about 8% greater than the distance between the first apex and the second apex.
12. The stent defined in claim 8, wherein the strut has a length in the range of from about 3% to about 7% greater than the distance between the first apex and the second apex.
13. The stent defined in any one of claims 7-12, wherein the strut comprises flexure means for substantially complementary extension and compression of a diametrically opposed pair of the struts upon flexure of the stent.
14. The stent defined in claim 13, wherein the flexure means comprises an S-shaped portion having a pair of joined curved sections wherein each curved section has an arc of about 180°.
15. The stent defined in claim 13, wherein the flexure means comprises an S-shaped portion having a pair of joined curved sections wherein each curve section has an arc of greater than 180°.
16. The stent defined in any one of claims 14-15, wherein the curved sections are of substantially the same size.

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17. The stent defined in any one of claims 14-15, wherein the curved sections are of different size.
18. The stent defined in ~~any one of~~ claims 1-17, wherein the side walls are substantially equidistant from one another along an axis orthogonal to the longitudinal axis of the stent.
19. The stent defined in ~~any one of~~ claims 1-17, wherein one of the side walls is curved with respect to the longitudinal axis.
20. The stent defined in claim 19, wherein the one of the side walls which is curved has a length up to about 35% greater than the distance between the respective termini of the first wall and the second wall.
21. The stent defined in claim 19, wherein the one of the side walls which is curved has a length up to about 15% greater than the distance between the respective termini of the first wall and the second wall.
22. The stent defined in claim 19, wherein the one of the side walls which is curved has a length in the range of from about 2% to about 8% greater than the distance between the respective termini of the first wall and the second wall.
23. The stent defined in claim 19, wherein the one of the side walls which is curved has a length in the range of from about 3% to about 7% greater than the distance between the respective termini of the first wall and the second wall.
24. The stent defined in any one of claims 1-17, wherein both of the side walls are curved with respect to the longitudinal axis.
25. The stent defined in claim 24, wherein the side walls have a length up to about 35% greater than the distance between the respective termini of the first wall and the second wall.

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26. The stent defined in claim 24, wherein the side walls have a length up to about 15% greater than the distance between the respective termini of the first wall and the second wall.
27. The stent defined in claim 24, wherein the side walls have a length in the range of from about 2% to about 8% greater than the distance between the respective termini of the first wall and the second wall.
28. The stent defined in claim 24, wherein the side walls have a length in the range of from about 3% to about 7% greater than the distance between the respective termini of the first wall and the second wall.
29. The stent defined in any one of claims 1-28, wherein at least one of the pair of side walls flexure means for substantially complementary extension and compression of a diametrically opposed pair of side walls upon flexure of the stent.
30. The stent defined in claim 29, wherein both of the side walls comprises flexure means for substantially complementary extension and compression of a diametrically opposed pair of side walls upon flexure of the stent.
31. The stent defined in any one of claims 29-30, wherein the flexure means comprises an S-shaped portion having a pair of joined curved sections wherein each curve section has an arc of about 180°.
32. The stent defined in any one of claims 29-30, wherein the S-shaped portion comprises a pair of joined curved sections wherein each curved section has an arc of greater than 180°.
33. The stent defined in any one of claims 31-32, wherein the curved sections are of substantially the same size.

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34. The stent defined in any one of claims 31-32, wherein the curved sections are of different size.
35. The stent defined in any one of claims 1-34, wherein the stent is constructed of stainless steel.
36. The stent defined in any one of claims 1-34, wherein the stent is constructed of a self-expanding material.
37. The stent defined in claim 36, wherein the self-expanding material is nitinol.
38. The stent defined in claim 36, wherein the self-expanding material expands at a temperature of greater than about 30°C.
39. The stent defined in claim 36, wherein the self-expanding material expands at a temperature of in the range of from about 30° to about 40°C.
40. The stent defined in any one of claims 1-39, in the form of a bifurcated stent comprising a proximal end and a distal end in communication with one another, the proximal end comprising a primary passageway and the distal end comprising a pair of secondary passageways.
41. The stent defined in claim 40, wherein the primary passageway is connected to the each of the secondary passageways at an intersection point.
42. The stent defined in claim 41, wherein the intersection point is reinforced with respect to the remainder of the stent.
43. The stent defined in any one of claims 41-42, wherein the intersection point is porous.

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44. The stent defined in claim 43, wherein the porosity of the intersection point is defined by a plurality intersecting members.
45. The stent defined in claim 44, wherein the intersecting members define a second repeating pattern.
46. The stent defined in claim 45, wherein the second repeating pattern is a polygon having a pair of side walls substantially parallel to the longitudinal axis of the primary passageway, a concave-shaped first wall and a convex-shaped second wall connecting the side walls, the side walls being substantially equidistant along an axis which is parallel to the longitudinal axis of the primary passageway, and a reinforcing bar disposed between and substantially parallel to the pair of side walls.
47. The stent defined in claim 46, wherein the reinforcing bar is disposed substantially equidistant from each of the side walls.
48. The stent defined in any one of claims 40-47, wherein the primary passageway has a substantially circular cross-section.
49. The stent defined in any one of claims 40-48, wherein each of the secondary passageways has a substantially circular cross-section.
50. The bifurcated stent defined in any one of claims 48-49, wherein the cross-sectional area of the primary passageway is substantially the same as the sum of the cross-sectional areas of each secondary passageway.
51. The stent defined in any one of claims 40-50, wherein the distal end is flexible with respect of the remainder of the stent.
52. The stent defined in any one of claims 40-51, wherein the proximal end is flexible with respect to the remainder of the stent.

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53. The stent defined in any one of claims 40-52, wherein the length of each of the primary passageway and the secondary passageways is substantially the same.

54. The stent defined in any one of claims 40-53, wherein the length of each of the primary passageway and the secondary passageways is different.